



wherein

the rings containing A and B have a double bond in the allowed position having an aromatic character;

A and B are selected from sulfur (S), oxygen (O) or CR<sup>9</sup>, R<sup>9</sup> being hydrogen, a C<sub>1</sub>-C<sub>20</sub>-alkyl, C<sub>3</sub>-C<sub>20</sub>-cycloalkyl, C<sub>2</sub>-C<sub>20</sub>-alkenyl, C<sub>6</sub>-C<sub>20</sub>-aryl, C<sub>7</sub>-C<sub>20</sub>-alkylaryl, or C<sub>7</sub>-C<sub>20</sub>-arylalkyl radical, optionally containing heteroatoms belonging to groups 13 or 15-17 of the Periodic Table of the Elements, with the proviso that if A is S or O, B is CR<sup>9</sup> or if B is S or O, A is CR<sup>9</sup>, and A and B cannot simultaneously be CR<sup>9</sup>;

R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup>, R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup>, and R<sup>8</sup> which may be the same as or different from each other, are hydrogen, a C<sub>1</sub>-C<sub>20</sub>-alkyl,

C<sub>3</sub>-C<sub>20</sub>-cycloalkyl, C<sub>2</sub>-C<sub>20</sub>-alkenyl, C<sub>6</sub>-C<sub>20</sub>-aryl, C<sub>7</sub>-C<sub>20</sub>-alkylaryl, or C<sub>7</sub>-C<sub>20</sub>-arylalkyl radical, optionally containing heteroatoms belonging to groups 13 or 15-17 of the Periodic Table of the Elements, and at least two adjacent substituents R<sup>1</sup> and R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup>, or R<sup>5</sup> and R<sup>6</sup> can form a ring comprising 4 to 8 atoms, and where at least one of R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup>, R<sup>7</sup> and R<sup>8</sup> is not hydrogen;

M is an atom of a transition metal selected from group 3, 4, 5, 6 or the lanthanide or actinide groups in the Periodic Table of the Elements,

X, which may be the same as or different from each other, is hydrogen, halogen atom, a R<sup>10</sup>, OR<sup>10</sup>, OSO<sub>2</sub>CF<sub>3</sub>, OCOR<sup>10</sup>, SR<sup>10</sup>, NR<sup>10</sup><sub>2</sub> or PR<sup>10</sup><sub>2</sub> group, wherein the substituents R<sup>10</sup> are hydrogen, a C<sub>1</sub>-C<sub>20</sub>-alkyl, C<sub>3</sub>-C<sub>20</sub>-cycloalkyl, C<sub>2</sub>-C<sub>20</sub>-alkenyl, C<sub>6</sub>-C<sub>20</sub>-aryl, C<sub>7</sub>-C<sub>20</sub>-alkylaryl, or C<sub>7</sub>-C<sub>20</sub>-arylalkyl radical, optionally containing heteroatoms belonging to groups 13 or 15-17 of the Periodic Table of the Elements;

p is an integer of from 1 to 3, being equal to the oxidation state of the metal M minus 2;

and

(B) at least one member selected from the group consisting of an alumoxane and a compound of formula D<sup>+</sup>E<sup>-</sup>, wherein D<sup>+</sup> is a Brønsted acid, which gives a proton and reacts irreversibly with a substituent

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AMENDMENT AFTER FINAL REJECTION

**PATENT**

X of the metallocene of formula (I) and  $E^-$  is a compatible anion, which stabilizes the active catalytic species originating from the reaction of the two compounds, and which is removed by an olefinic monomer.